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**PATENT ABSTRACTS OF JAPAN**

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(71) Applicant: NEC CORP

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**(54) CIRCUIT DEVICE AND  
MANUFACTURE THEREOF** Abstract Drawing**(57) Abstract:**

**PROBLEM TO BE SOLVED:** To improve productivity and strength of a BGA(ball-grid-array) package, where a flip chip is mounted on an interposer substrate.

**SOLUTION:** The gap between the lower surface of a flip chip 2 and the upper surface of an interposer substrate 3 is filled with a single mold resin 101, which is filled with the gap between the upper surface of the interposer substrate 3 and the lower surface of a heat spreader 11 as well. The single mold resin 101 is made to contact with a large area at each part for improved joint strength, while it acts as both an underfill resin and a stiffener for reduced manufacturing processes and components.

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